4. Video User Data Extensions

The video user data extensions to the MPEG-2 syntax and semantics described in this standard provide a means to support a number of VBI services beyond those supported in the original ATSC A/53 standard. Where the A/53 standard only supported EIA-608 closed caption data carried on line 21, the VBI enhancements extend support to include:

a) EIA-608-compliant closed captioning for one or more VBI lines other than line 21 (Ref. [10])

b) Nielsen Source Identification (SID)/Automated Measurement Of Lineups (AMOL) signals (Ref. [11] and [12])

c) North American Basic Teletext per the EIA-516 NABTS Specification (Ref. [13])

d) World System Teletext (WST) (Ref. [14])

e) Vertical Interval Time Code (VITC) (Ref. [15])

4.1 Closed Captioning

Many television services carry closed caption information in line 21, field 1 of the VBI. According to the EIA-608 standard, closed caption data may also be carried in line 21 of field 2. Certain system service providers use the EIA-608 closed caption format to carry additional data in VBI lines other than line 21. The user data syntactic constructs described in this document allow multiple VBI lines per display field, including the standard line 21 closed caption usage.

4.2 Nielsen SID/AMOL Signals

AMOL encoding places information in the VBI and includes a SID code and a date/time stamp. It is used by broadcasters to verify that programs or commercials air at the intended times. VBI user data syntactic constructs support one or more VBI lines for this purpose.

4.3 Other VBI Standards

The encoding method described in this standard is applicable to VBI standards in addition to those mentioned here because it is a general purpose method for representing a basic VBI waveform. Most standards in current use use two-level luminance encoding, however this standard accommodates multi-level pulse-amplitude modulation (PAM) coding as well. The technique is applicable to both PAL and NTSC. If the MPEG-2 video syntax carried a video program in PAL format, the syntax described here can be used as-is to carry VBI data and reconstruct a PAL standard video waveform.

5. Picture User Data Syntactic Extensions

The method used in this document for describing video bitstream syntax is the same as that used in the MPEG-2 International Standard, *ISO/IEC 13818-2*. The syntactic extensions to MPEG-2 Main Profile at Main Level operation for VBI services are implemented using the picture user data syntax defined in subsection 5.2.

5.1 Syntax Conventions and Definitions

5.1.1 Method of Describing Bitstream Syntax

Those *ISO/IEC 13818-2* conventions and definitions that appear in VBI user data syntax are reviewed in the remainder of this subsection.

As exemplified in Table 5–1, this syntax resembles Ccode and uses the convention that a variable or expression evaluating to a non-zero value is equivalent to a condition that is true.

Table 5–1. Bitstream Data Elements and Conditions

while (condition) {	If the condition is true, then the group of data elements occurs next in the data stream. This repeats until the condition is not true.
data_element	
. . .	
}	
do {	The data element always occurs at least once.
data_element	
. . .	
} while (condition)	The data element is repeated until the condition is not true.
if (condition) {	If the condition is true, then the first group of data elements occurs next in the data stream.
data_element	
. . .	
} else {	If the condition is not true, then the second group of data elements occurs next in the data stream.
data_element	
. . .	
}	
for (i = 0; i < n; i++) {	The group of data elements occurs n times. Conditional constructs within the group of data elements may depend on the value of the loop control variable i, which is set to zero for the first occurrence, incremented to one for the second occurrence, and so forth.
data_element	
. . .	
}	
/* comment ... */	Explanatory comment that may be deleted entirely without in any way altering the syntax.

Each data item in the bitstream appears in bold type and is described by its name, its length in bits, and a mnemonic for its type and order of transmission. The action caused by a decoded data element in a bitstream depends on the value of that data element and on data elements previously decoded. The constructs in normal type in the above table are used to express the conditions when data elements are present.

A group of data elements may contain nested conditional constructs. For compactness, the {} are omitted when only one data element follows. Array data is represented as follows:

data_element[n]	the n+1th element of an array of data
data_element[m][n]	the m+1, n+1th element of a two-dimensional array of data

While the syntax descriptions given in this document are expressed in procedural terms, it should not be assumed that subsection 5.2 implements a satisfactory decoding procedure. In particular, it defines a correct and error-free input bitstream for compatible encoders. Actual decoders must include means to look for start codes in order to begin decoding correctly, and to identify errors, erasures and insertions while decoding. Neither the methods to identify these situations nor the actions to be taken are specified in this document.

5.1.2 Reserved, Forbidden & Marker Bits

The terms *reserved* and *forbidden* are used in the description of some values of several fields in the coded bitstream.

reserved—Indicates that the value may be used in the future for ISO/IEC-defined extensions.

forbidden—Indicates a value that shall never be used (usually in order to avoid emulation of start codes).

marker_bit—Indicates a one-bit field in which the value zero is forbidden. These marker bits are introduced at several points in the syntax to avoid start code emulation.

Operators

+	Addition.
-	Subtraction (as a binary operator) or negation (as a unary operator).
++	Increment.
- -	Decrement.
>	Greater than.
>=	Greater than or equal to.
<	Less than.
<=	Less than or equal to.
==	Equal to.
!=	Not equal to.
=	Assignment operator.

5.1.3 Mnemonics

The following mnemonics are defined to describe the different data types used in the user data syntax described in subsection 5.2:

bslbf—Bit string, left bit first, where "left" is the order in which bit strings are written in the specification. Bit strings are written as a string of 1s and 0s within single quote marks, e.g. '1000 0001'. Blanks within a bit string are for ease of reading and have no significance.

uimsbf—Unsigned integer, most significant bit first.

5.1.4 Start Codes

Start codes are specific bit patterns that do not otherwise occur in the video stream. Each start code consists of the 23-bit start code prefix string '0000 0000 0000 0000 0000 0001' followed by an 8-bit integer that identifies the type of start code as described in ISO/IEC 13818-2. Start codes are always byte aligned, and may be preceded by any number of zero stuffing bits.

5.1.5 Definition of Functions

The following utility functions for picture coding algorithms are defined:.

bytealigned()	returns 1 if the next bit in the bitstream is the first bit in a byte. Otherwise it returns 0.
nextbits()	permits comparison of a bit string with the next bits to be decoded in the bitstream.
next_start_code()	removes any zero bit and zero byte stuffing and locates the next start code as defined in Figure 5-1.

	No. of bits	Mnemonic
next_start_code() {		
while (!bytealigned())	1	0
zero_bit		
while (nextbits() != '0000 0000 0000 0000 0000 0001')	8	0000 0000
zero_byte		
}		

Figure 5-1. Next Start Code Function Syntax

5.2 Picture User Data Syntactic Extensions

The picture user data syntax to support VBI services is shown in Figure 5-4, where shaded cells highlight syntactic extensions relative to the standard ATSC syntax described in Ref. [5].

As shown, the ATSC syntax is extensible via the definition of additional user_data_type_code values. This standard defines type code value 0x04 as additional_EIA_608_data() and type code value 0x05 as luma_PAM_data(). The following sections define these data structures.

	No. of bits	Mnemonic
user_data() {		
user_data_start_code	32	bslbf
ATSC_identifier	32	bslbf
user_data_type_code	8	bslbf
if (user_data_type_code == '0x03') {		
process_em_data_flag	1	bslbf
process_cc_data_flag	1	bslbf
additional_data_flag	1	bslbf
cc_count	5	uimsbf
em_data	8	bslbf
for (i=0; i<cc_count*2+1; i++) {		
marker_bits	5	'11111'
cc_valid	1	bslbf
cc_type	2	bslbf
cc_data_1	8	bslbf
cc_data_2	8	bslbf
}		
marker_bits	8	'11111111'
if (additional_data_flag) {		
while (nextbits() != '0000 0000 0000 0000 0000 0001') {		
additional_user_data		
}		
}		
} else { if (user_data_type_code == '0x04') {		
additional_EIA_608_data()		
} else { if (user_data_type_code == '0x05') {		
luma_PAM_data()		
} else {		
ATSC_reserved_user_data		
}		
next_start_code()		
}		

Figure 5-2. Extensions to ATSC Picture User Data Syntax

5.3 Additional EIA 608 Data

Figure 5-3 defines the additional_EIA_608_data() data structure.

additional_EIA_608_data() {		
marker_bits	3	'111'
additional_cc_count	5	uimsbf
for (i=0 ; i < additional_cc_count ; i++) {		
additional_cc_valid	1	bslbf
marker_bits	2	'11'
additional_cc_line_offset	4	uimsbf
additional_cc_field_number	2	uimsbf
additional_cc_data_1	8	bslbf
additional_cc_data_2	8	bslbf
}		
while(nextbits() != '0000 0000 0000 0000 0000 0001') {		
additional_type_4_data		
}		

Figure 5-3. Additional EIA 608 Data Structure and Syntax

additional_cc_count—A five-bit integer (values in the range [1:31]) indicating the number of lines of EIA 608 to be defined following the field. All such constructs must occur in the intended display order, assuming an interlaced display line and field display order.

additional_cc_valid—A Boolean flag that indicates, when set, that the two bytes of additional closed caption data to follow are valid. When the flag is false, the data shall be ignored by the decoder. The additional_cc_valid flag may be set to zero to create a place-holder for closed caption data to be inserted into the digital multiplex downstream from the encoder.

additional_cc_line_offset—A five-bit integer (values in the range [1:31]) giving the offset in lines from which the EIA 608 closed caption data originated relative to the base VBI frame line (line 9 of 525-line [NTSC and PAL/M] field 1, line 272 of 525-line field 2, line 5 of 625-line [all PAL except PAL/M] field 1, and line 318 of 625-line field 2), as specified in *CCIR Report 624-4*.

additional_cc_field_number—The number of the field, in display order, from which the EIA 608 data originated, interpreted in the following Table.

Table 5-1. Field Number for Additional EIA 608 Data

additional_cc_ field_number	Meaning
00	Forbidden
01	1st display field
10	2nd display field
11	3rd display field (the repeated field in film mode).

additional_cc_data_1—The first 8-bit byte of EIA 608 closed caption data to be reconstructed on the line identified by additional_cc_line_offset within the field identified by additional_cc_field_number.

additional_cc_data_2—The second 8-bit byte of EIA 608 closed caption data to be reconstructed.

5.4 Luminance PAM Data Structure

Figure 5-4 defines the luma_PAM_data() structure.

luma_PAM_data() {		
luma_PAM_count	5	uimsbf
for (i=0 ; i<luma_PAM_count ; i++) {		
luma_PAM_priority	2	uimsbf
field_number	2	uimsbf
line_offset	5	uimsbf
start_sample	9	uimsbf
PAM_increment	6	uimsbf
PAM_modulus	10	uimsbf
bits_per_symbol	3	uimsbf
low_amplitude_level	8	uimsbf
high_amplitude_level	8	uimsbf
pulse_shape	3	uimsbf
if (pulse_shape == "rectangular") {		
symbol_to_transition_ratio	8	uimsbf
}		
if (pulse_shape == "raised_cosine") {		
reserved	3	bslbf
PAM_alpha	5	uimsbf
}		
if (pulse_shape == "PRC") {		
reserved	8	bslbf
}		
if (pulse_shape == "reserved") {		
reserved	8	bslbf
}		
word_count	5	uimsbf
for (j=0 ; j<word_count ; j++) {		
marker_bit	1	'1'
luma_PAM_word	22	bslbf
}		
marker_bit	1	'1'
remainder_count	5	uimsbf
for (j=0 ; j< remainder_count ; j++) {		
symbol_bit	1	bslbf
}		
marker_bit	1	'1'
}		
while(nextbits() != '0000 0000 0000 0000 0000 0001') {		
additional_type_5_data		
}		

Figure 5-4. Luminance PAM Data Structure and Syntax.

luma_PAM_count—A five-bit integer (values in the range [0:31]) indicating the number of Luminance PAM constructs following the field. All such constructs must occur in the intended display order, assuming an interlaced display line and field display order.

luma_PAM_priority—A number between 0 and 3 indicating the priority of constructs in picture reconstruction where different levels of hardware capability exist.

field_number—The number of the field, in display order, from which the VBI data originated, interpreted in Table 5-2.

Table 5-2. Field Number for Picture User Data

field_number	Meaning
00	Forbidden
01	1st display field
10	2nd display field
11	3rd display field (the repeated field in film mode).

line_offset—A five-bit integer (values in the range [1:31]) giving the offset in lines from which the Luminance PAM data originated relative to the base VBI frame line (line 9 of 525-line [NTSC and PAL/M] field 1, line 272 of 525-line field 2, line 5 of 625-line [all PAL except PAL/M] field 1, and line 318 of 625-line field 2), as specified in *CCIR Report 624-4*.

start_sample—A 9-bit unsigned integer (values in the range [0:511]) which indicates the sample of the reconstructed luminance line at which the transition into the first Luminance PAM symbol shall start. start_sample shall be in the same units as CCIR 601 (Ref. [4]) samples and shall be relative to the first sample of CCIR 601 reconstructed frames.

PAM_increment—A 6-bit unsigned integer (values in the range [1:63]) which indicates the Luminance PAM symbol clock increment value and takes on values that describe, together with PAM_modulus, the relationship of the Luminance PAM symbol clock to a 27 MHz reference. See the semantics of PAM_modulus for more details.

PAM_modulus—A 10-bit unsigned integer (values in the range [2:1023]) which indicates the Luminance PAM symbol clock modulus value and takes on values that describe, together with PAM_increment, the relationship of the Luminance PAM symbol clock to a 27 MHz reference. Specifically, PAM_increment and PAM_modulus are related to the Luminance PAM symbol rate as:

PAM_increment / PAM_modulus = Luminance PAM symbol rate / system_clock_frequency[1]

where

system_clock_frequency is specified in ISO/IEC 13818-1 as 27 MHz ± 30 ppm.

bits_per_symbol—A 3-bit enumerated type that specifies the number of bits per symbol according to the following table.

[1]The value of nrz_increment must not exceed nrz_modulus-1.

Table 5-3. Bits Per Symbol Encoding

bits_per_symbol	Meaning
000	forbidden
001	One bit per symbol: two-level PAM encoding
010	Two bits per symbol: four-level PAM coding
011	Three bits per symbol: eight-level PAM coding
100	Four bits per symbol: sixteen-level PAM coding
101-111	reserved for future use

low_amplitude_level—An 8-bit unsigned integer (values in the range [1:254] which indicates the amplitude at which symbols of the lowest amplitude value shall be reconstructed in units of amplitude of CCIR 601 reconstructed frames.

high_amplitude_level— An 8-bit unsigned integer (values in the range [1:254] which indicates the amplitude at which symbols of the highest amplitude value shall be reconstructed in units of amplitude of CCIR 601 reconstructed frames.

pulse_shape—A 3-bit unsigned integer which indicates the shape of the pulses which shall be used to reconstruct this line of Luminance PAM. The meaning of pulse_shape is given in Table 5-4.

Table 5-4. Pulse Shape.

pulse_shape	Meaning
000	**rectangular**
001	**raised_cosine**
010	**PRC**—partial response coding
011-111	reserved

The pulse shape of a PRC signaling system as described by:

$$H(\omega) = 2 * T * \cos(\omega T/2)$$

in the frequency domain , as represented in Figure 5-1 or

$$h(t) = \frac{4}{\pi} * \frac{\cos(\pi * t/T)}{(1 - 4 * t^2/T^2)}$$

in the time domain, as represented in Figure 5-2.

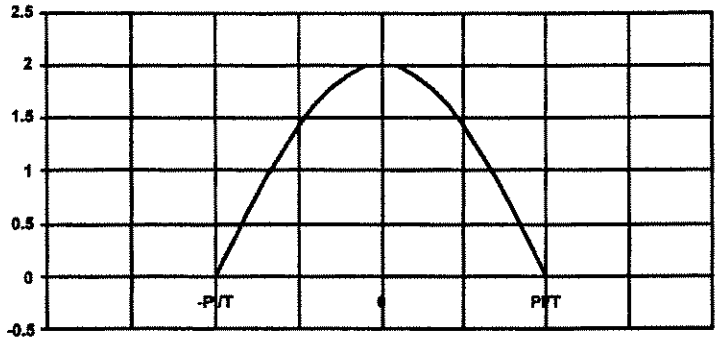

Figure 5-1 Frequency Response of PRC Filter (Linear Scale)

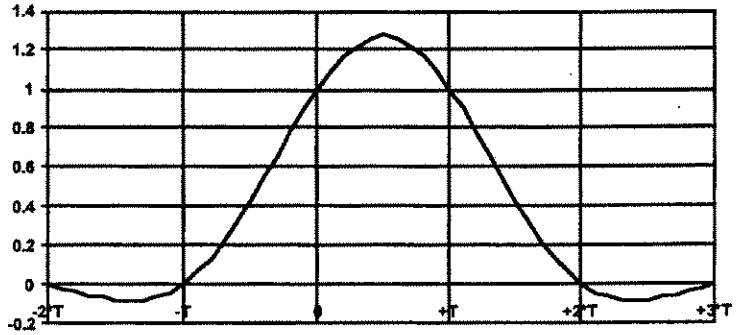

Figure 5-2 PRC Impulse Response

symbol_to_transition_ratio—An 8-bit unsigned integer (values in the range [16:255]) that indicates the ratio of each Luminance PAM symbol's duration to each symbol's transition duration between the amplitudes specified by low_amplitude_level and high_amplitude_level and having units of 2^{-4} (0.0625). This field describes symbols with a symbol to transition ratio ranging from 1.0 to 15.9375.

PAM_alpha—A 5-bit unsigned integer (values in the range [0:31]) which indicates the value of Alpha for the Raised Cosine filter whose pulse shape describes each Luminance PAM symbol with units of 2^{-5} (0.03125). This field describes values of Alpha from 0.03125 to 1.0. The meaning of PAM_alpha is defined in Table 5-5.

Table 5-5. PAM Alpha.

PAM_alpha	Alpha value
00000	1.0
00001-11111	PAM_alpha * 0.03125

word_count—A 5-bit unsigned integer (values in the range [0:31]) which indicates the number of marker_bit and luma_PAM_word pairs that follow this field.

The syntax defines the sequence of N-bit symbols representing PAM-encoded luminance values defining the VBI line. The value of N is given by the bits_per_symbol parameter. Each symbol is placed most-significant bit first. Symbols defined first represent samples to be reconstructed on the leftmost side of the video line as it is displayed from left to right. For reference, the sequence of N-bit symbols is called the *symbol bit list.*

To avoid start-code emulation, a marker bit is inserted between each group of 22 bits taken from the symbol bit list.

luma_PAM_word—A string representing the next 22 bits of the symbol bit list.

remainder_count—A 5-bit unsigned integer (values in the range [0:21]) which indicates the number of symbol_bits that follow this field.

symbol_bit—A single bit of the symbol bit list.

Example: Given the following sequence of 3-bit symbols: 1, 1, 1, 7, 1, 1, 1, 2, 3, 0, 4, 5, the word_count would be one, the luma_PAM_word would be (001 001 001 111 001 001 001 00), the remainder_count would be 16, and the remaining bits would be (1 010 011 000 100 101).

cc: Rick

PUBLIC NOTICE
FEDERAL COMMUNICATIONS COMMISSION
1919 M STREET, N.W.
WASHINGTON, D.C. 20554 DA 97-518

News media information 202/418-0500 Fax-On-Demand 202/418-2830 Internet: http://www.fcc.gov ftp.fcc.gc

Report No. CS 97-8 CABLE SERVICES ACTION March 12, 1997

MODIFICATION OF
INDUSTRY PROPOSAL FOR RATING VIDEO PROGRAMMING
(CS Docket No. 97-55)

1. On January 17, 1997, the National Association of Broadcasters ("NAB"), the National Cable Television Association ("NCTA") and the Motion Picture Association of America ("MPAA") submitted a joint proposal to the Commission describing a voluntary system for rating video programming (the "industry proposal"). On February 7, 1997, the Commission issued a Public Notice seeking comment on the industry proposal.

2. On March 7, 1997, NAB, NCTA and MPAA notified the Commission that, to resolve certain trademark concerns, the industry proposal's symbol for the category "Mature Audience Only" will be changed from "TV-M" to "TV-MA." This modification will become effective March 15, 1997. The descriptors of the content of programs in this category, and all other aspects of the industry proposal, remain unchanged. (A copy of the letter submitted by NAB, NCTA and MPAA is attached hereto as an Appendix.)

3. The comment periods and procedures for filing comments in this proceeding remain unchanged from the Commission's Public Notice of February 7, 1997.

Media Contact: Morgan Broman (202) 418-2358.
Cable Services Bureau Contact: Rick Chessen at (202) 418-7200.

-- FCC --
APPENDIX

March 7, 1997

Mr. William F. Caton
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: CS Docket No. 97-55

Dear Mr. Caton:

This letter will notify the Commission that, to resolve certain trademark concerns, one of the icons in the TV Parental Guidelines that we submitted to the Commission on January 17, 1997 will be changed. Effective March 15, 1997, the symbol for the category, "Mature Audience Only," will be:

The descriptors of the content of programs in this category, and all other aspects of the system of TV Parental Guidelines described in our January 17 filing, remain unchanged.

Please direct any questions concerning this matter to the undersigned.

Respectfully submitted,

Cynthia Merifield
Motion Picture
Association of AmericaJill Luckett
National Cable Television
AssociationJacIGoodman
NationalAssociation
ofBroadcasters

cc: Chairman and Commissioners
Meredith J. Jones (w/diskette)
Roy J. Stewart
Christopher J. Wright

* * *

12/16/96

Clinton Says Ratings System Proposed By TV Industry Should Be Given Chance

By Bryan Gruley
Staff Reporter of The Wall Street Journal

WASHINGTON — President Clinton, siding for now with the television industry, said parents should give a controversial TV-ratings system a chance before trying to change it.

The president's comments make it less likely that federal regulators will challenge the movie-style rating plan when they review it next month. The Federal Communications Commission could impose its own system if it feels the one designed voluntarily by the industry is inadequate.

The ratings plan, developed by a team of broadcasting and cable-industry executives, has drawn sharp criticism from parents' groups and others who say the new ratings don't offer enough information about the content of TV shows, particularly those with violence or sexual themes. The industry group plans to unveil the plan this week.

President Clinton told reporters Friday he feels "very strongly" that the government should not get involved. He said parents should "check the shows against the ratings, give it 10 months to work, and then if [the ratings] are inadequate or there needs to be some more content in the rating systems . . . we'll be able to make that argument."

Jack Valenti, leader of the industry group and the head of the Motion Picture Association of America, praised the president's approach on ABC-TV's "This Week" program yesterday. "We're going to do what the president suggested" and re-evaluate the system after 10 months, he said. Last week, Mr. Valenti vowed that if the group's plan is rejected and a government system is imposed, the group will fight the move on First Amendment grounds.

Under the plan, all TV shows except news and sports will be ranked under six categories: TV-G, for shows deemed suitable for all ages; TV-PG, for programs warranting parental guidance; TV-14, for children 14 and over; and TV-M, for mature viewers. Two categories for small children also are being implemented: K, for all children; and K-7, for children seven and older.

Privately, FCC officials say they're not eager to interfere with the system just yet. FCC Chairman Reed Hundt declined to comment on the president's remarks. But Mr. Hundt, who is a Democrat and an old friend of the president, told reporters earlier Friday he would have "no opinions" until he sees the plan. "I'm glad that [the industry] volunteered something, [but] I'm frankly disappointed that it's not immediately playing to rave reviews," he said. "Obviously, from my perspective, life is easier if everybody in the audience says, 'What a great show.' "

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TECHNOLOGY & TELECOMMUNICATIONS

Bell Atlantic, Nynex Plan to Suspend Agreement With CAI Wireless Systems

By Leslie Cauley
Staff Reporter of The Wall Street Journal

Bell Atlantic Corp. and Nynex Corp. insist they will make good on their promise to eventually deliver video programming to customers. They are consid-

* * *

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Under the plan, all TV shows except news and sports will be ranked under six categories: TV-G, for shows deemed suitable for all ages; TV-PG, for programs warranting parental guidance; TV-14, for children 14 and over; and TV-M, for mature viewers. Two categories for small children also are being implemented: K, for all children; and K-7, for children seven and older.

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TECHNOLOGY & TELECOMMUNICATIONS

Bell Atlantic, Nynex Plan to Suspend Agreement With CAI Wireless Systems

By Leslie Cauley
Staff Reporter of The Wall Street Journal

Bell Atlantic Corp. and Nynex Corp. insist they will make good on their promise to eventually deliver video programming to customers. They are consid-

cc:Mail for: Richard Lowell

Subject: R4.3WG4
From: Bill Posner <billp@eegent.com> at ccmail 2/13/98 9:36 AM
To: Richard Lowell at SEL-SD-TVA
To: "'ditzikr@panasonic.com'" <ditzikr@panasonic.com> at CCMAIL
To: "'ForlerJ@rnd1.indy.tce.com'" <ForlerJ@rnd1.indy.tce.com> at CCMAIL
To: "'jjohnson@eia.org'" <jjohnson@eia.org> at CCMAIL
To: "'WMRICK@sharpsec.com'" <WMRICK@sharpsec.com> at CCMAIL

After reviewing a copy of Tape 1 we confirmed the Tape 1 feedback about the Text 1 data being overwritten in character position 32. Apparently in our haste to get the Disclaimer into the T1 channel we corrupted it. On the next version of the tape we will put the disclaimer at the front of the tape and correct the T1 message so that it displays correctly.

The other comment about the CC1 display however, does not seem correct. Our test message uses pop-on and roll-up captions. It also uses the roll-up repositioning command so that some captions jump up as noted in the feedback report.

We are preparing another tape that will include all of the items discussed during the past teleconferences. The attached script details the proposed contents of the tape. It is a draft and may change a bit as we implement the script. I think that this script should serve as the document to distribute to the R4.3 members for the next meeting. I will let you know when we have a tape to distribute. At this point I believe that the Feb 17 teleconference can be cancelled.

After the last teleconference I realized that some of the members might be interested in buying our Program Rating Station Monitor so that they can view the first tape. Our Model SM 101 is a Station Monitor that displays the program rating codes being transmitted. I have attached a sheet describing the unit. If any of you are interested in buying one, we would sell them to the WG members at $675 each (a 25% discount from the usual price).

Bill Posner

CEMA/EEG Program Rating Test Tape
Evaluation Tape for R4.3 Working Group Revision: 2/12/98

Disclaimer: The Disclaimer Statement is encoded into the T1 data channel. The tape starts with a display of the Disclaimer.

Section 1A This portion of the tape contains:

- Caption and Text data in field 1 (see Disclaimer above).
- XDS packets in field 2.
  0103, 0105, 0102, 0104, 0110, 0113, 0501, 0502)
- Field 2 transmission pauses for 1.3 seconds every 15 seconds
  (the Zenith inhibit)

The display shows:

Running Timecode
A display of most of the XDS packet data.

The tape contains a 10 second segment for each of the valid MPAA and TV Rating Codes defined in EIA 744. For simplicity, most of the XDS packets are the same in each segment However the Program Name (0103) and Program Rating (0105) packets change from segment to segment.

The constant packets (0501 & 0502) and the repeated packets are shown below. The Row 1 Description packet changes to identify the segment.

Network ID - 0501454547204E6574776F726B000Fxx {EEG Network}
Call Letters - 050243454D410Fxx {CEMA}

Pgm Type - 010426200Fxx {OTHER}
Length/TIS - 0102xxxx0Fxx {xxxxx}
Description Row 4 -
0113454547205844532058707265737320446 56D6F000Fxx
{EEG XDS Xpress Demo}

Description Row 1 -
011053656374696F6E2031612C205365676D656E742031000Fxx
{Section 1a, Segment 1}

Each segment contains a different Program Rating code and a different Program Name. The Program Name carries the rating level being transmitted. The Program Name is shown underlined in the OSD display.

Program Rating Evaluation Test Tape

The tape has a one minute lead in to allow for insertion of the Disclaimer Notice. The program ratings start at 01:01:00.

Program Rating Evaluation Test Tape

The following list shows the sequence of codes along with their start times.

01:01:00 Pgm Rating - 010541000Fxx
Pgm Name - 01034D50414120470Fxx {MPAA G}

01:01:10 Pgm Rating - 010545000Fxx
Pgm Name - 01034D504141204E432D31370Fxx {MPAA NC-17}

01:01:20 Pgm Rating - 010542000Fxx
Pgm Name - 01034D504141205047000Fxx {MPAA PG}

01:01:30 Pgm Rating - 010546000Fxx
Pgm Name - 01034D50414120580Fxx {MPAA X}

01:01:40 Pgm Rating - 010543000Fxx
Pgm Name - 01034D5041412050473133000Fxx {MPAA PG13}

01:01:50 Pgm Rating - 010547000Fxx
Pgm Name - 01034D504141204E52000Fxx {MPAA NR}

01:02:00 Pgm Rating - 010544000Fxx
Pgm Name - 01034D50414120520Fxx {MPAA R}

01:02:10 Pgm Rating - No Rating Sent
Pgm Name - 01034E4F20524154494E47Fxx {NO RATING}

01:02:20 Pgm Rating - 010548410Fxx
Pgm Name - 0103545620590Fxx {TV Y}

01:02:30 Pgm Rating - 0105484D0Fxx
Pgm Name - 01035456203134204C000Fxx {TV 14 L}

01:02:40 Pgm Rating - 010548420Fxx
Pgm Name - 0103545620593700Fxx {TV Y7}

01:02:50 Pgm Rating - 010568450Fxx
Pgm Name - 01035456203134204400Fxx {TV 14 D}

01:03:00 Pgm Rating - 010548620Fxx
Pgm Name - 010354562059372046560Fxx {TV Y7 FV}

01:03:10 Pgm Rating - 010548750Fxx
Pgm Name - 0103545620313420562053000Fxx {TV 14 V S}

01:03:20 Pgm Rating - 010548430Fxx
Pgm Name - 0103545620470Fxx {TV G}

01:03:30 Pgm Rating - 0105486D0Fxx
Pgm Name - 0103545620313420562040C000Fxx {TV 14 V L}

01:03:40 Pgm Rating - 010548440Fxx
Pgm Name - 0103545620504700Fxx {TV PG}

01:03:50 Pgm Rating - 010568650Fxx
Pgm Name - 0103545620313420562044000Fxx {TV 14 V D}

Program Rating Evaluation Test Tape

01:04:00	Pgm Rating -	010548640Fxx
	Pgm Name -	0103545620504720560000Fxx {TV PG V}
01:04:10	Pgm Rating -	0105485D0Fxx
	Pgm Name -	0103545620313420532040C000Fxx {TV 14 S L}
01:04:20	Pgm Rating -	010548540Fxx
	Pgm Name -	0103545620504720530000Fxx {TV PG S}
01:04:30	Pgm Rating -	010568550Fxx
	Pgm Name -	0103545620313420532044000Fxx {TV 14 S D}
01:04:40	Pgm Rating -	0105484C0Fxx
	Pgm Name -	010354562050472040C000Fxx {TV PG L}
01:04:50	Pgm Rating -	0105684D0Fxx
	Pgm Name -	010354562031342040C2044000Fxx {TV 14 L D}
01:05:00	Pgm Rating -	010568440Fxx
	Pgm Name -	0103545620504720440000Fxx {TV PG D}
01:05:10	Pgm Rating -	0105487D0Fxx
	Pgm Name -	0103545620313420562053204C000Fxx {TV 14 V S L}
01:05:20	Pgm Rating -	010548740Fxx
	Pgm Name -	0103545620504756205300Fxx {TV PG V S}
01:05:30	Pgm Rating -	010568750Fxx
	Pgm Name -	0103545620313420562053204400Fxx {TV 14 V S D}
01:05:40	Pgm Rating -	0105486C0Fxx
	Pgm Name -	0103545620504720562040C000Fxx {TV PG V L}
01:05:50	Pgm Rating -	0105686D0Fxx
	Pgm Name -	0103545620313420562040C2044000Fxx {TV 14 V L D}
01:06:00	Pgm Rating -	010568640Fxx
	Pgm Name -	0103545620504720562044000Fxx {TV PG V D}
01:06:10	Pgm Rating -	0105685D0Fxx
	Pgm Name -	0103545620313420532040C2044000Fxx {TV 14 S L D}
01:06:20	Pgm Rating -	0105485C0Fxx
	Pgm Name -	0103545620504720532040C000Fxx {TV PG S L}
01:06:30	Pgm Rating -	0105687D0Fxx
	Pgm Name -	0103545620313420562053204C2044000Fxx {TV 14 V S L D}
01:06:40	Pgm Rating -	010568540Fxx
	Pgm Name -	0103545620504720532044000Fxx {TV PG S D}
01:06:50	Pgm Rating -	010548460Fxx
	Pgm Name -	01035456204D41000Fxx {TV MA}
01:07:00	Pgm Rating -	0105684C0Fxx
	Pgm Name -	0103545620504720 4C2044000Fxx {TV PG L D}
01:07:10	Pgm Rating -	010548660Fxx

Pgm Name - 01035456204D412056000Fxx {TV MA V}

01:07:20	Pgm Rating -	0105487C0Fxx
	Pgm Name -	0103545620504720562053204C000Fxx {TV PG V S L}
01:07:30	Pgm Rating -	010548560Fxx
	Pgm Name -	01035456204D412053000Fxx {TV MA S}
01:07:40	Pgm Rating -	010568740Fxx
	Pgm Name -	0103545620504720562053204400 0Fxx {TV PG V S D}
01:07:50	Pgm Rating -	0105484E0Fxx
	Pgm Name -	01035456204D41204C000Fxx {TV MA L}
01:08:00	Pgm Rating -	0105686C0Fxx
	Pgm Name -	0103545620504720562O4C2044000Fxx {TV PG V L D}
01:08:10	Pgm Rating -	010548760Fxx
	Pgm Name -	01035456204D4120562053000Fxx {TV MA V S}
01:08:20	Pgm Rating -	0105685C0Fxx
	Pgm Name -	0103545620504720532O4C2044000Fxx {TV PG S L D}
01:08:30	Pgm Rating -	0105486E0Fxx
	Pgm Name -	01035456204D412056204C000Fxx {TV MA V L}
01:08:40	Pgm Rating -	0105687C0Fxx
	Pgm Name -	0103545620504720562053204C2044000Fxx {TV PG V S L D}
01:08:50	Pgm Rating -	0105485E0Fxx
	Pgm Name -	01035456204D412053204C000Fxx {TV MA S L}
01:09:00	Pgm Rating -	010548450Fxx
	Pgm Name -	0103545620313400 0Fxx {TV 14}
01:09:10	Pgm Rating -	0105487E0Fxx
	Pgm Name -	01035456204D4120562053204C000Fxx {TV MA V S L}
01:09:20	Pgm Rating -	010548650Fxx
	Pgm Name -	0103545620313420560 00Fxx {TV 14 V}
01:09:30	Pgm Rating -	010548400Fxx
	Pgm Name -	01034E4F4E450Fxx {NONE}
01:09:40	Pgm Rating -	010548550Fxx
	Pgm Name -	0103545620313420530 00Fxx {TV 14 S}
01:09:50	Pgm Rating -	010548400Fxx
	Pgm Name -	01034E4F4E450Fxx {NONE}

Section 1B This portion of the tape has captions in the CC3 data channel. It runs for 4 minutes with the Program Rating code changing after 2 minutes. This Section contains:

- Caption and Text data in field 1 (see Disclaimer above).
- GMA Caption in field 2.

- XDS packets in field 2.
  0103, 0105, 0102, 0104, 0110, 0113, 0501, 0502)
- Field 2 transmission pauses for 1.3 seconds every 15 seconds, unless inhibited by the captions.

02:00:00 Pgm Rating - 010548440Fxx
Pgm Name - 01035456205047000Fxx {TV PG}

02:02:00 Pgm Rating - 010568650Fxx
Pgm Name - 0103545620313420562044000Fxx {TV 14 V D}

Section 1C This portion of the tape is a repeat of Section 1B except that the Program Rating packet is sent only once every three seconds.

03:00:00 Pgm Rating - 010548440Fxx
Pgm Name - 01035456205047000Fxx {TV PG}

03:02:00 Pgm Rating - 010568650Fxx
Pgm Name - 0103545620313420562044000Fxx {TV 14 V D}

Section 1D This portion of the tape is a repeat of the conditions shown in Section 1A and is 4 minutes long. The only XDS packet present is the Program Rating packet and it is sent rapidly (no time between packets except during the Zenith Pause).

04:00:00 Pgm Rating - 010548440Fxx {TV PG}

04:02:00 Pgm Rating - 010568650Fxx {TV 14 V D}

Section 2 This portion of the tape uses the same compliment of Line 21 data as that of Section 1A. The Program Rating and Program Name packets are changed as indicated below.

Section 2A Four segments with MPAA ratings, each 30 seconds duration. The second byte in the packet is different in each segment.

05:00:00 Pgm Rating - 010541400Fxx
Pgm Name - 01034D50414120470Fxx {MPAA G}

05:00:30 Pgm Rating - 010541600Fxx
Pgm Name - 01034D504141202020470Fxx {MPAA G}

05:01:00 Pgm Rating - 010551400Fxx
Pgm Name - 01034D5041412020202020470Fxx {MPAA G}

05:01:30 Pgm Rating - 010551470Fxx
Pgm Name - 01034D504141202020202020470Fxx {MPAA G}

Section 2B Four segments with combined MPAA and TV ratings, each 30 seconds duration. The a_1a_0 bits change in each segment. The ratings used are MPAA R and TV-Y7.

06:00:00 Pgm Rating - 010544410Fxx
Pgm Name - 0103613161303D3030204D5041410Fxx {a1a0=00 MPAA}

06:00:30 Pgm Rating - 01054C410Fxx
Pgm Name - 0103613161303D30312054560Fxx {a1a0=01 TV}

06:01:00 Pgm Rating - 010554410Fxx
Pgm Name - 0103613161303D3130204D5041410Fxx {a1a0=10 MPAA}

06:01:30 Pgm Rating - 01055C410Fxx
Pgm Name - 0103613161303D313120526573657665640Fxx {a1a0=11 Reserved}

Section 2C Three segments of invalid rating combinations of 15 seconds duration each. They should be considered as bad rating codes.

07:00:00 Pgm Rating - 010548510Fxx
Pgm Name - 01035456205937205300 0Fxx {TV Y7 S}

07:00:15 Pgm Rating - 010548630Fxx
Pgm Name - 0103545620472056000Fxx {TV G V}

07:01:30 Pgm Rating - 010568460Fxx
Pgm Name - 01035456204D4120444000Fxx {TV MA D}

Section 2D A group of segments to test the response to Bad Checksum, Bad Parity, and the five second time out for loss of the Rating packet. Each segment is 10 seconds in duration.

Program Rating Evaluation Test Tape

08:00:00	Pgm Rating -	010548420Fxx
	Pgm Name -	0103545620593720464F4F440Fxx {TV Y7 GOOD}
08:00:10	Pgm Rating -	010548430Fxx
	Pgm Name -	0103545620474241442050415 20Fxx {TV G BAD PAR}
08:00:20	Pgm Rating -	010548440Fxx
	Pgm Name -	0103545620504720474F4F440Fxx {TV PG GOOD}
08:00:30	Pgm Rating -	010548450Fxx
	Pgm Name -	0103545620313420424144204353 0Fxx {TV 14 BAD CS}
08:00:40	Pgm Rating -	010548460Fxx
	Pgm Name -	01035456204D4120312042414420435 30Fxx {TV MA 1 BAD CS}
08:00:50	Pgm Rating -	010548460Fxx
	Pgm Name -	01035456204D4120322042414420435 30Fxx {TV MA 2 BAD CS}
08:01:00	Pgm Rating -	010548460Fxx
	Pgm Name -	01035456204D4120332042414420435 30Fxx {TV MA 3 BAD CS}
08:01:10	Pgm Rating -	010548460Fxx
	Pgm Name -	01035456204D4120342042414420435 30Fxx {TV MA 4 BAD CS}

LINE 21 STATION MONITOR

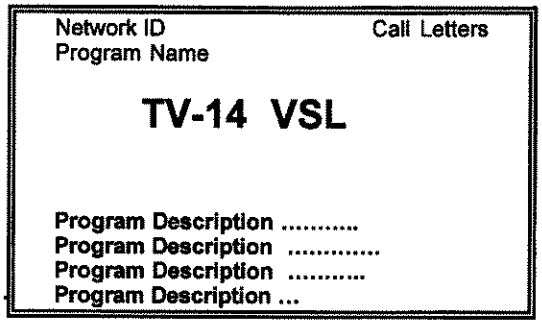
PROGRAM RATING MONITOR

Model SM 101

The EEG Model SM 101 displays the contents of the Program Rating packet contained in the line 21, field 2 Extended Data Services (XDS) data channel. The monitor provides continuous verification of the **V-Chip Blocking** codes being inserted by the EEG Smart Encoder.

- **Continuous display of V-Chip code transmissions.**
- **Front panel LEDs show Video present and Program Rating data present.**
- **The SM 101 requires no operator intervention once installed.**
- **Model SM 106, provides six SM 101s in a 1 rack unit high chassis.**

The Monitor Video outputs contain an On Screen Display (OSD) of the XDS data. It displays key Current Class and Channel Class packets if they are also being transmitted.



"INVALID RATING" is displayed when there is no Program Rating packet being sent or if the recovered packet contains an invalid rating. If any of the other displayed XDS packets do not exist, those item will not be displayed.

cc:Mail for: Richard Lowell

Subject: FWD: RE: R4.3 WG4 2/6 2pm Telcon
From: "Johnson; Jean" <jeanj@eia.org> at ccmail 2/5/98 2:29 PM
To: Richard Lowell at SEL-SD-TVA

TO: R4.3 WG4 Content Advisory Test Tape Members
For discussion under agenda item 5. If you have any comments on either tape 1or the attached proposal for Tape 2, please send them to the R4.3 WG4 reflector (email address is 60eg56p@eia.org) or send them to jeanj@eia.org with a request to distribute prior to tomorrow's telcon. Jean

===== Original Message from billp@eegent.com (Bill Posner) at 2/05/98 1:32 pm
>Dear Jean,
>I am attaching a description of a possible scenario for Tape 2 (or an >extension to Tape 1). We should send it to the WG members as the strawman >for discussion on Agenda Item 5.
>
>
>
>----------
>From: Johnson, Jean[SMTP:jeanj@eia.org]
>Sent: Wednesday, February 04, 1998 5:07 PM
>To: "Mr. William Posner"
>Subject: R4.3 WG4 2/6 2pm Telcon
>
>TO: R4.3 WG4 Content Advisory Test Tape Members
>
>Please RSVP to jeanj@eia.org indicating whether or not you plan to >participate.
>
>The next R4.3 WG4 telcon has been scheduled on:
>
>DATE: Friday, February 6, 1998
>TIME: 2:00pm EST
>DIAL-IN: 703-736-7401
>CONFIRMATION #: TBD
>MODERATOR: CEMA/Jean Johnson
>
>Proposed Agenda:
>1. Call to Order/Introductions
>2. Review/Approve Agenda
>3. Review/Approve 1/23/98 Minutes
>4. Final Review/Comment Tape 1
>5. Finalize Tape 2 Contents
>6. Other Business
>7. Next Meeting Agenda
>8. Schedule Next 2 Meetings
> o February 17, 2:00pm EST Telcon
> o TBD March 20 2:pm
>9. Adjourn
>
>
>
>Jean Johnson, Engineering Project Manager
>CEMA http://www.cemacity.org
>Email: jjohnson@eia.org
>Phone: 703-907-7972

>Fax: 703-907-7693 or 7601

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

----------[Uuencoded File Attachment: PRtape2A.doc]----------

Working Group on CA Test Tape

Possible Program Rating Signals On Tape 2

1) MPAA codes with various second byte data.

2) Packet with combined MPAA and TV Ratings, while varying the a0 & a1 bits.

3) Valid codes with bad Checksum.

4) Valid codes with bad Parity.

5) Non-valid combinations.

6) Test 5 second time out.

Item 1 Packets: MPAA-G 4140, 4160, 5140, 5147

Item 2 Packets: MPAA-R, TV-Y7 4441 - $a_1a_0 = 00$ (MPAA)
4C41 - $a_1a_0 = 01$ (TV)
5441 - $a_1a_0 = 10$ (MPAA)
5C41 - $a_1a_0 = 11$ (Reserved)

Item 3 Packets: Repeat some segments from Tape 1 with Checksum errors.

Item 4 Packets: Repeat some segments from Tape 1 with Parity errors.

Item 5 Packets:
TV-Y, S 4851
TV-G, V 4863
TV-MA, D 6846

Item 6 Packets: Sequence of segments: TV-Y7 (good),
TV-G (all bad parity)
TV-PG (good)
TV-14 (all bad checksum)
TV-MA (one bad checksum)
TV-MA (two bad checksums)
TV-MA (Three bad checksums)
TV-MA (four bad checksums)

Disclaimer for insertion to the Program Rating test Tape January 19, 1998

While efforts have been made to ensure that the content-advisory packet information in this test tape reflects EIA-744 requirements, certain implementation decisions were made when this test tape was created.

No guarantees, either expressed or implied, are made with respect to the degree to which the content advisory packet information contained in this test tape reflects the content-advisory packet information that a receiver may encounter in actual use.

The next version of this test tape is expected to contain additional segments, including erroneous packet information, that will provide additional opportunities to test receiver performance.

CEMA/EEG Program Rating Test Tape
Evaluation Tape for R4.3 Working Group 1/19/98

Section 1A This portion of the tape contains:

- Caption and Text data in field 1.
- XDS packets in field 2.
  (0103, 0105, 0102, 0104, 0110, 0113, 0501, 0502)
- Field 2 transmission pauses for 1.3 seconds every 15 seconds
  (the Zenith inhibit)

The display shows:

Running Timecode
A display of most of the XDS packet data.

The tape contains a 10 second segment for each of the valid MPAA and TV Rating Codes defined in EIA 744. For simplicity, most of the XDS packets are the same in each segment However the Program Name (0103) and Program Rating (0105) packets change from segment to segment.

The constant packets (0501 & 0502) and the repeated packets are shown below. The Row 1 Description packet changes to identify the segment.

Network ID - 0501454547204E6574776F726B000Fxx {EEG Network}
Call Letters - 050243454D410Fxx {CEMA}

Pgm Type - 010426200Fxx {OTHER}
Length/TIS - 0102xxxx0Fxx {xxxxx}
Description Row 4 -
011345454720584453205870726573732044656D6F000Fxx
{EEG XDS Xpress Demo}

Description Row 1 -
011053656374696F6E2031612C205365676D656E742031000Fxx
{Section 1a, Segment 1}

Each segment contains a different Program Rating code and a different Program Name. The Program Name carries the rating level being transmitted. The Program Name is shown underlined in the OSD display.

The tape has a one minute lead in to allow for insertion of the Disclaimer Notice. We did not have the time to put it in the tape today. The program ratings start at 01:01:00.

Program Rating Evaluation Test Tape

The following list shows the sequence of codes along with their start times.

01:01:00	Pgm Rating - 010541000Fxx Pgm Name - 01034D50414120470Fxx {MPAA G}
01:01:10	Pgm Rating - 010545000Fxx Pgm Name - 01034D504141204E432D31370Fxx {MPAA NC-17}
01:01:20	Pgm Rating - 010542000Fxx Pgm Name - 01034D504141205047000Fxx {MPAA PG}
01:01:30	Pgm Rating - 010546000Fxx Pgm Name - 01034D50414120580Fxx {MPAA X}
01:01:40	Pgm Rating - 010543000Fxx Pgm Name - 01034D5041412050473133000Fxx {MPAA PG13}
01:01:50	Pgm Rating - 010547000Fxx Pgm Name - 01034D504141204E52000Fxx {MPAA NR}
01:02:00	Pgm Rating - 010544000Fxx Pgm Name - 01034D50414120520Fxx {MPAA R}
01:02:10	Pgm Rating - 010548400Fxx Pgm Name - 01034E4F4E450Fxx {NONE}
01:02:20	Pgm Rating - 010548410Fxx Pgm Name - 0103545620590Fxx {TV Y}
01:02:30	Pgm Rating - 0105484D0Fxx Pgm Name - 01035456203134204C000Fxx {TV 14 L}
01:02:40	Pgm Rating - 010548420Fxx Pgm Name - 0103545620593700Fxx {TV Y7}
01:02:50	Pgm Rating - 010568450Fxx Pgm Name - 01035456203134204400Fxx {TV 14 D}
01:03:00	Pgm Rating - 010548620Fxx Pgm Name - 010354562059372046560Fxx {TV Y7 FV}
01:03:10	Pgm Rating - 010548750Fxx Pgm Name - 0103545620313420562053000Fxx {TV 14 V S}
01:03:20	Pgm Rating - 010548430Fxx Pgm Name - 0103545620470Fxx {TV G}
01:03:30	Pgm Rating - 0105486D0Fxx Pgm Name - 01035456203134205620 4C000Fxx {TV 14 V L}
01:03:40	Pgm Rating - 010548440Fxx Pgm Name - 0103545620504 7000Fxx {TV PG}

01:03:50	Pgm Rating -	010568650Fxx
	Pgm Name -	0103545620313420562044000Fxx {TV 14 V D}
01:04:00	Pgm Rating -	010548640Fxx
	Pgm Name -	010354562050472056000Fxx {TV PG V}
01:04:10	Pgm Rating -	0105485D0Fxx
	Pgm Name -	0103545620313420532044000Fxx {TV 14 S L}
01:04:20	Pgm Rating -	010548540Fxx
	Pgm Name -	010354562050472053000Fxx {TV PG S}
01:04:30	Pgm Rating -	010568550Fxx
	Pgm Name -	0103545620313420532044000Fxx {TV 14 S D}
01:04:40	Pgm Rating -	0105484C0Fxx
	Pgm Name -	010354562050472044000Fxx {TV PG L}
01:04:50	Pgm Rating -	0105684D0Fxx
	Pgm Name -	010354562031342044000Fxx {TV 14 L D}
01:05:00	Pgm Rating -	010568440Fxx
	Pgm Name -	010354562050472044000Fxx {TV PG D}
01:05:10	Pgm Rating -	0105487D0Fxx
	Pgm Name -	0103545620313420562053204C000Fxx {TV 14 V S L}
01:05:20	Pgm Rating -	010548740Fxx
	Pgm Name -	010354562050472053000Fxx {TV PG V S}
01:05:30	Pgm Rating -	010568750Fxx
	Pgm Name -	0103545620313420562053204C000Fxx {TV 14 V S D}
01:05:40	Pgm Rating -	0105486C0Fxx
	Pgm Name -	010354562050472056204C000Fxx {TV PG V L}
01:05:50	Pgm Rating -	0105686D0Fxx
	Pgm Name -	0103545620313420562044000Fxx {TV 14 V L D}
01:06:00	Pgm Rating -	010568640Fxx
	Pgm Name -	010354562050472056204C000Fxx {TV PG V D}
01:06:10	Pgm Rating -	0105685D0Fxx
	Pgm Name -	0103545620313420532044000Fxx {TV 14 S L D}
01:06:20	Pgm Rating -	0105485C0Fxx
	Pgm Name -	010354562050472053204C000Fxx {TV PG S L}
01:06:30	Pgm Rating -	0105687D0Fxx
	Pgm Name -	0103545620313420562053204C2044000Fxx {TV 14 V S L D}
01:06:40	Pgm Rating -	010568540Fxx
	Pgm Name -	010354562050472053204C000Fxx {TV PG S D}
01:06:50	Pgm Rating -	010548460Fxx
	Pgm Name -	01035456204D41000Fxx {TV MA}

01:07:00	Pgm Rating -	0105684C0Fxx
	Pgm Name -	01035456205047204C2044000Fxx {TV PG L D}
01:07:10	Pgm Rating -	010548660Fxx
	Pgm Name -	01035456204D412056000Fxx {TV MA V}
01:07:20	Pgm Rating -	0105487C0Fxx
	Pgm Name -	01035456205047205620532044C000Fxx {TV PG V S L}
01:07:30	Pgm Rating -	010548560Fxx
	Pgm Name -	01035456204D412053000Fxx {TV MA S}
01:07:40	Pgm Rating -	010568740Fxx
	Pgm Name -	01035456205047205620532044000Fxx {TV PG V S D}
01:07:50	Pgm Rating -	0105484E0Fxx
	Pgm Name -	01035456204D41204C000Fxx {TV MA L}
01:08:00	Pgm Rating -	0105686C0Fxx
	Pgm Name -	01035456205047205620532044000Fxx {TV PG V L D}
01:08:10	Pgm Rating -	010548760Fxx
	Pgm Name -	01035456204D4120562053000Fxx {TV MA V S}
01:08:20	Pgm Rating -	0105685C0Fxx
	Pgm Name -	01035456205047205320532044000Fxx {TV PG S L D}
01:08:30	Pgm Rating -	0105486E0Fxx
	Pgm Name -	01035456204D412056204C000Fxx {TV MA V L}
01:08:40	Pgm Rating -	0105687C0Fxx
	Pgm Name -	01035456205047205620532044000Fxx {TV PG V S L D}
01:08:50	Pgm Rating -	0105485E0Fxx
	Pgm Name -	01035456204D412053204C000Fxx {TV MA S L}
01:09:00	Pgm Rating -	010548450Fxx
	Pgm Name -	0103545620313400Fxx {TV 14}
01:09:10	Pgm Rating -	0105487E0Fxx
	Pgm Name -	01035456204D4120562053204C000Fxx {TV MA V S L}
01:09:20	Pgm Rating -	010548650Fxx
	Pgm Name -	0103545620313420560000Fxx {TV 14 V}
01:09:30	Pgm Rating -	010548400Fxx
	Pgm Name -	01034E4F4E450Fxx {NONE}
01:09:40	Pgm Rating -	010548550Fxx
	Pgm Name -	0103545620313420530000Fxx {TV 14 S}
01:09:50	Pgm Rating -	010548400Fxx
	Pgm Name -	01034E4F4E450Fxx {NONE}

cc:Mail for: Richard Lowell

Subject: 1/23/98 2PM EST WG4 CA Test Tape Telcon
From: "Johnson; Jean" <jeanj@eia.org> at ccmail 1/23/98 12:06 PM
To: Richard Lowell at SEL-SD-TVA

FYI, additional information for Agenda item 6. Jean

===== Original Message from billp@eegent.com (Bill Posner) at 1/22/98 1:07 pm
>Jean,
>Sorry for geting this to you so late in the week. The attached lists four
>items that could be candidates for the second tape (or the second part of
>tape 1). It should lead into the discussion for agenda item 6.
>
>Regards,
>Bill
>
>
>
>----------
>From: Johnson, Jean[SMTP:jeanj@eia.org]
>Sent: Monday, January 19, 1998 4:19 PM
>To: Mr. William Posner
>Subject: 1/23/98 2PM EST WG4 CA Test Tape Telcon
>
>TO: R4.3 WG4 CA Test Tape Telcon
>
>The next meeting of R4.3 WG4 Content Advisory Test Tape has been scheduled.
>Please RSVP to jeanj@eia.org indicating whether or not you plan to
>participate.
>
>DATE: January 23, Friday
>TIME: 2:00pm EST
>DIAL-IN: 703-736-7401
>CONFIRMATION #: 701967
>MODERATOR: CEMA/Jean Johnson
>
>The proposed agenda follows:
>
>1. Call to Order/Introductions
>2. Review/Approve Agenda
>3. Review/Approve 12/16 & 1/16 Minutes
>4. Review Action Items
>5. Discuss/Comment on Draft Tape 1
>6. Review/Discuss Strawman for Tape 2 (containing invalid codes)
>7. Review Tape Distribution Arrangements
>8. Next Meeting Agenda
>9. Schedule Next 2 Meetings
> o February 6, Friday at 2PM EST
> o TBD
>10. Adjourn
>
>
>
>Jean Johnson, Engineering Project Manager
>CEMA http://www.cemacity.org
>Email: jjohnson@eia.org

>Phone: 703-907-7972
>Fax: 703-907-7693 or 7601

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

Uuencoded File Attachment: PRtape2.doc

Working Group on CA Test Tape

Possible Program Rating Signals On Tape 2

1) MPAA codes with various second byte data.

2) Packet with combined MPAA and TV Ratings, while varying the a0 & a1 bits.

3) Valid codes with bad Checksum.

4) Valid codes with bad Parity.

5) Invalid combination.

6) 5 sec time out

cc:Mail for: Richard Lowell

Subject: CA Test Tape Cost
From: "Johnson; Jean" <jeanj@eia.org> at ccmail 1/19/98 2:48 PM
To: Richard Lowell at SEL-SD-TVA

0924-0996-B

Richard, would you be willing to provide a Federal Express account number directly to Bill Posner for use to ship your review copy of the draft CA test tape? This will help EEG to defray its expenses on this project. Bill Posner's email address is billp@eegent.com, and his phone # is 516-293-7472. Thanks.

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

cc:Mail for: Richard Lowell

Subject: Re: 1/23/98 2PM EST WG4 CA Test Tape Telcon
From: Richard Lowell 1/19/98 2:45 PM
To: "Johnson; Jean" <jeanj@eia.org> at ccmail
cc: Kazuhiko Inagaki
cc:

RE: R4.3 WG4 Content Adv Test Tape Telcon

Hi Jean.

I'm planning to be on this call.

Best regards

Richard L.

==========
= Richard Lowell =
= US Research Laboratories =
= Sony Electronics Inc. =
= 16450 West Bernardo Drive =
= San Diego, CA 92127 USA =
= Tel:619-673-3235, Fax:619-676-3761 =
= E-mail: Richard_Lowell@ccmail.sgo.sony.com =
==========

Subject: 1/23/98 2PM EST WG4 CA Test Tape Telcon
From: "Johnson; Jean" <jeanj@eia.org> at ccmail
Date: 1/19/98 4:19 PM

TO: R4.3 WG4 CA Test Tape Telcon

The next meeting of R4.3 WG4 Content Advisory Test Tape has been scheduled. Please RSVP to jeanj@eia.org indicating whether or not you plan to participate.

DATE: January 23, Friday
TIME: 2:00pm EST
DIAL-IN: 703-736-7401
CONFIRMATION #: 701967
MODERATOR: CEMA/Jean Johnson

The proposed agenda follows:

1. Call to Order/Introductions
2. Review/Approve Agenda
3. Review/Approve 12/16 & 1/16 Minutes
4. Review Action Items
5. Discuss/Comment on Draft Tape 1
6. Review/Discuss Strawman for Tape 2 (containing invalid codes)
7. Review Tape Distribution Arrangements Dubbing cost ?
8. Next Meeting Agenda
9. Schedule Next 2 Meetings
   - o February 6, Friday at 2PM EST
   - o TBD
10. Adjourn

Text Item 1

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

cc:Mail for: Richard Lowell

Subject: 1/23/98 2PM EST WG4 CA Test Tape Telcon
From: "Johnson; Jean" <jeanj@eia.org> at ccmail 1/19/98 4:19 PM
To: Richard Lowell at SEL-SD-TVA

TO: R4.3 WG4 CA Test Tape Telcon

The next meeting of R4.3 WG4 Content Advisory Test Tape has been scheduled. Please RSVP to jeanj@eia.org indicating whether or not you plan to participate.

DATE: January 23, Friday
TIME: 2:00pm EST
DIAL-IN: 703-736-7401
CONFIRMATION #: 701967
MODERATOR: CEMA/Jean Johnson

The proposed agenda follows:

1. Call to Order/Introductions
2. Review/Approve Agenda
3. Review/Approve 12/16 & 1/16 Minutes
4. Review Action Items
5. Discuss/Comment on Draft Tape 1
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7. Review Tape Distribution Arrangements
8. Next Meeting Agenda
9. Schedule Next 2 Meetings
   - o February 6, Friday at 2PM EST
   - o TBD
10. Adjourn

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

cc:Mail for: Richard Lowell

Subject: Sony's Mailing Address for CA WG Test Tape
From: Richard Lowell 1/16/98 12:04 PM
To: billp@eegent.com at ccmail
cc: Kazuhiko Inagaki
cc: Seiji Kawaberi
cc:

January 16, 1998

Mr. Bill Posner
EEG Enterprises, Inc.
1 Rome St.
Farmingdale, New York 11735

Dear Mr. Posner:

Please send a copy of the content advisory WG test tape to me at:

Sony Electronics Inc.
16450 West Bernardo Drive, MZ7205
San Diego, California 92127-1804

Thank you very much.

Sincerely,

Richard Lowell
ATC Engineer

==========
= Richard Lowell =
= Sony Electronics Inc. =
= 16450 West Bernardo Drive, MZ7205 =
= San Diego, CA 92127 USA =
= Tel:619-673-3235, Fax:619-676-3761 =
= E-mail: Richard_Lowell@ccmail.sgo.sony.com =
==========

cc:Mail for: Richard Lowell

Subject: Re: R4.3 WG4 Content Adv Test Tape Telcon
From: Richard Lowell 1/14/98 11:58 AM
To: "Johnson; Jean" <jeanj@eia.org> at ccmail
cc: Kazuhiko Inagaki
cc:

billp@eegent.com

RE: R4.3 WG4 Content Adv Test Tape Telcon

Hi Jean

Please count me in for this Telcon.

Thank you.

Best regards

Richard L.

==========
= Richard Lowell =
= US Research Laboratories =
= Sony Electronics Inc. =
= 16450 West Bernardo Drive =
= San Diego, CA 92127 USA =
= Tel:619-673-3235, Fax:619-676-3761 =
= E-mail: Richard_Lowell@ccmail.sgo.sony.com =
==========

Subject: R4.3 WG4 Content Adv Test Tape Telcon
From: "Johnson; Jean" <jeanj@eia.org> at ccmail
Date: 1/5/98 7:18 PM

TO: R4.3 WG4 Content Advisory Test Tape

Please RSVP to jjohnson@eia.org indicating whether or not you plant to participate (or if you wish to suggest revisions to the agenda).

The next R4.3 WG4 telcon is scheduled on:

DATE: January 16, 1998 → 23
TIME: 2:00pm EST
DIAL-IN: 703-736-7401
CONFIRMATION #: 701955
MODERATOR: CEMA/Jean Johnson

XDS express time code to smart encoder

The proposed Agenda is:

1. Call to order/introductions
2. Review Status of Tape Development
3. Finalize Tape 2 Development Issues
4. Other Business
5. Next Meeting Agenda
6. Schedule Next 2 Meetings
7. Adjourn

Proposed revisions to the agenda are welcome. Jean

Text Item 1

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

cc:Mail for: Richard Lowell

Subject: R4.3 WG4 Content Adv Test Tape Telcon
From: "Johnson; Jean" <jeanj@eia.org> at ccmail 1/5/98 7:18 PM
To: Richard Lowell at SEL-SD-TVA

TO: R4.3 WG4 Content Advisory Test Tape

Please RSVP to jjohnson@eia.org indicating whether or not you plant to participate (or if you wish to suggest revisions to the agenda).

The next R4.3 WG4 telcon is scheduled on:

DATE: January 16, 1998
TIME: 2:00pm EST
DIAL-IN: 703-736-7401
CONFIRMATION #: 701955
MODERATOR: CEMA/Jean Johnson

The proposed Agenda is:

1. Call to order/introductions
2. Review Status of Tape Development
3. Finalize Tape 2 Development Issues
4. Other Business
5. Next Meeting Agenda
6. Schedule Next 2 Meetings
7. Adjourn

Proposed revisions to the agenda are welcome. Jean

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

cc:Mail for: Richard Lowell

Subject: Proposed Content Advisory Test Tape
From: "Johnson; Jean" <jeanj@eia.org> at ccmail 12/15/97 2:41 PM
To: Richard Lowell at SEL-SD-TVA

TO: R4.3 TDS Subcommittee Members

As discussed last week, a proposal for a content advisory test tape was developed by an informal group following the R4.3 meeting. That group's proposal follows. The Content Advisory Test Tape Work Group is holding a telcon tomorrow afternoon. While it is a quick turnaround (with my apologies), the Work group welcomes any comments on the tape proposal prior to the telcon.

If you wish to offer any comments concerning the initial proposal (would the tape (as described in the initial proposal be useful to your company?; Do you recommend any changes in the tape as proposed?; Are there any comments on the tape format (for distribution purposes)?, please forward them to me at jjohnson@eia.org for receipt by Noon EST on 12/16/97 & I will forward your commetns to the CA Test Tape Working Group.

Please contact me with any questions. (The initial proposal follows). Jean

PS If you would like to become an active member of the Content Advisory Test Tape Working Group, please let me know.

Initial Proposal

Section I
A: Transmission of all valid Program Rating codes in successive 15 second intervals. Each 15 second segment will contain:
1) Captions and Text in field 1
2) Only XDS data in field 2 with PR (105) packet repeated with high priority.
3) Other XDS packets included are : 103, 102, 104, 110, 113, 501, 502
4) The field 2 pause (Zenith Inhibit) will be enabled.
5) OSD display of PR and other XDS packets.
6) Continuous running Time Code displayed in OSD.

B: Repeat of Segment A using selected non-valid Program Rating codes.

C: Repeat of Segment A with Rollup Captions present in field 2.

D: Repeat of Segement A with the PR codes transmitted only once every 3 seconds.

Other Suggested Sections

A: Segments with only the PR packet present in field 2. Transmission at a very high repetition rate. How many codes need to be tested?

B: Change Program ID or Program Name but leave PR unchanged.

C: Unblanking operation test.

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

cc:Mail for: Richard Lowell

Subject: R4.3 WG4 CA Test Tape Draft Mins
From: "Johnson; Jean" <jeanj@eia.org> at ccmail 1/23/98 12:19 PM
To: Richard Lowell at SEL-SD-TVA

FYI, I have attached the minutes of the 12/16 & 1/16 telcons.

Jean

Jean Johnson, Engineering Project Manager
CEMA http://www.cemacity.org
Email: jjohnson@eia.org
Phone: 703-907-7972
Fax: 703-907-7693 or 7601

Uuencoded File Attachment: R4341216.doc

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-----------------------------------------------------------------
  Uuencoded File Attachment: R4340116.doc
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Chair Approval 1/23/98
Legal Approval 1/19/98

MINUTES
Consumer Electronics Manufacturers Association
R4.3 WG4 Content Advisory Test Tape
January 16, 1998 2:00p.m. EST

Members Present:	EEG	W. Posner
	Matsushita/Panasonic	R. Ditzik
		R. Kaimo
	Mitsubishi	E. Jou
		W. Lou
	Sony	R. Lowell
	Sharp	W. Myrick
	Zenith	K. Gaughan
		T. Zato
Staff Present:	CEMA	J. Johnson

Action items developed/revised at this meeting:
- **Secure cost estimates for duplication of master tapes in _", 8mm, and super 8mm master tapes, and duplication as _", super 8mm and VHS copies. (Johnson by 1/23/98))**
- **Distribute to each company represented on WG4 a VHS copy of draft Tape 1 plus documentation. (Posner by 1/23/98)**
- **Distribute a proposal outlining contents in Tape 2 for working group discussion. (Posner)**

Action items developed at previous meeting:
- **Continue to detail the tape description, and recirculate for further R4.3 review/comment. (Posner/McLaughlin) *(Revised 1/16/98)***
- **Address tape copyright, duplication cost, distribution and pricing issues. (Johnson) *(Revised 1/16/98)***

1. Call to Order/Introductions

The meeting was called to order at 2:15pm.

2. Review Status of Tape Development

Mr. Posner indicated that EEG is ready to cut Tape 1. In the proposal for Tape 1, that includes all valid codes, Mr. Posner had planned to include all valid codes, in order, down the table. It was the consensus of the working group that the codes should be ordered in such a way that receivers block and unblock sequentially. The current plan for the first segment of Tape 1 is the first code in the first half of the list is the first code in the tape; the second code is the first code in the bottom half of the list, alternating until all codes are finished.

The plan is to go through MPAA first, so that the receiver blocks and unblocks as necessary in response to each code. Each code is 10 seconds per code segment. The tape is about 9 minutes long. The color bar will be used as the visual, and the time code will be stripped on.

Ms. Johnson read the approved disclaimer for the first test tape. The approved tape disclaimer follows:

While efforts have been made to ensure that the content-advisory packet information in this test tape reflects EIA-744 requirements, certain implementation decisions were made when this test tape was created.

No guarantees, either expressed or implied, are made with respect to the degree to which the content advisory packet information contained in this test tape reflects the content-advisory packet information that a receiver may encounter in actual use.

The next version of this test tape is expected to contain additional segments, including erroneous packet information, that will provide additional opportunities to test receiver performance.

Those present agreed to the disclaimer.

It was the consensus that the purpose of the test tape is to provide a consistent industry reference for lab testing of receivers.

Mr. Posner reported that EEG can produce master tapes that are either _" or super/high 8. Mr. Posner also reported that EEG can duplicate copies in VHS, but not Super VHS.

ACTION: Secure cost estimates for duplication of master tapes in _", 8mm, and super 8mm master tapes, and duplication as _", super 8mm and VHS copies. (Johnson)

ACTION: Distribute to each company represented on WG4 a VHS copy of draft Tape 1 plus documentation. (Posner by 1/23/98)

Working group members agreed to limit the distribution of the draft Tape 1 to one copy/company, and to provide an overnight express account number to defray EEG's distribution costs.

3. Finalize Tape 2 Development Issues

ACTION: Distribute a proposal outlining contents in Tape 2 for working group discussion. (Posner)

It was noted that additional error conditions may be considered for inclusion in subsequent editions of the tape(s).

4. Other Issues

Mr. Myrick raised the issue of providing manufacturers with the ability to do their own encoding of the raw data stream. Mr. Posner reported that EEG has a data program product that creates the file itself, and those with interest may discuss it with Mr. Posner off-line. Mr. Posner noted that entering errors on the tape is not possible with this particular system because it is designed to eliminate errors, prohibiting users from entering an invalid code (for example, from 9:00a-9:30a, the program event is rated. The user may only enter a valid EIA-744 code. S,L,V,D bits can only be selected for a rating code that permits these bits.)

5. Next Meeting Agenda

The substantive agenda items for the next WG4 telcon will be:

- Review/Discuss Strawman for Tape 2 (containing invalid codes)
- Review Tape Distribution Arrangements

- Discuss Draft Tape 1/Provide Comments

6. Schedule Next 2 Meetings

The next two WG4 meetings were scheduled on:

- January 23, Friday, at 2PM EST (telcon)
- February 6, Friday, at 2PM EST (telcon) (tentative)

7. Adjourn

The meeting adjourned at 3:02pm EST. This meeting was held in accordance with CEMA rules and procedures.

Chair Approval 1/23/98
Legal Approval 1/19/98

MINUTES
Consumer Electronics Manufacturers Association
R4.3 WG4 Content Advisory Test Tape
December 16, 1997 2:00p.m. EST

Members Present:	EEG	W. Posner
		P. McLaughlin (Chair)
	Matsushita/Panasonic	R. Ditzik
		R. Kaimo
	Mitsubishi	E. Jou
		W. Lou
	Sharp	W. Myrick
	Zenith	K. Gaughan
		T. Zato
Staff Present:	CEMA	Jean Johnson

Action items developed/revised at this meeting:
- **Continue to detail the tape description, and recirculate for further R4.3 review/comment. (Posner/McLaughlin)**
- **Address tape copyright, duplication cost, distribution and pricing issues. (Johnson)**

1. Call to Order/Introductions

Mr. Posner called the meeting to order at 2:05p.m. EST, noting that following the last R4.3 meeting, an informal group met to define initial specifications for a content advisory (CA) test tape.

2. Review/discuss Initial Proposal

The initial proposal is Attachment A to these minutes.

Section 1A was reviewed. It was noted that:

- The initial proposal includes transmission of all valid program rating codes.
- Segments are repeated at 15 second intervals.
- Packet priorities follow 608 criteria.
- The 105 packet, with the requirement that it be sent once every 3 ~~segments~~ sec, can also be sent at a higher repetition rate.
- The tape is intended to run just under 15 minutes.
- Section 1A will include approximately 44 codes.

In discussing Section 1A4, it was noted that if only XDS is present in field 2, then field 2 transmission would be interrupted every three seconds for a period of 1.3 seconds

In discussing Section 1A5, it was noted that a description of the show, and a time code would be included.

In discussing Section 1B, it was noted that the items in section 1A will be repeated with non-valid rating codes. The entry, "Selected non-valid Program Rating Codes", was discussed.

It was suggested that this segment would contain only non-valid codes. Alternating valid/non-valid codes could be included in another section. Bad parity and invalid checksums are also intended for inclusion.

Those present agreed that transmissions that would produce an error condition or cause the screen to flash should be included in the tape, including bad XDS packets.

It was noted that program rating data is doubly protected with parity on each byte, and with a checksum, and that the purpose of the tape is to provide enough signal aberration to determine whether or not the receiver reacts properly.

Section 1C will repeat section 1A with roll-up captions present in Field 2.

It was noted that Section 1 contains valid codes, but not data errors.

If non-valid codes and data errors are entered, they should be included as part of Section 1B. It was noted that the OSD will indicate the actual rating code and a time code.

Ratings in different parts of the tape send ratings at different frequencies. Section A is at a high rate of transmission, but that is a function of other XDS packets present. It was noted that the interval is irregular, but higher than every 3 seconds.

3. Review suggestions for other sections

Suggestions included:

- Segments with only the PR packet present in fields 2 at a very high repeition rate. Shorter section, with a couple of different rating codes should be sufficient.
- Change Program ID or Program Name but leave PR unchanged. Show unblank until the next content advisory packet is received.
- Determine whether unblanking works.

It was noted that interleaved data is not permitted.

ACTION: Continue to detail the tape description, and recirculate for further R4.3 review/comment. (Posner/McLaughlin)

4. Proposed Work Schedule

This item was not discussed.

5. Discuss Plan for Duplication & Distribution

It was noted that approximate tape run times are: Section A-~13 minutes; Section B-~13minutes; Section C-~13 minutes; and Section D-~13 minutes.

It was suggested that Section 1A codes should appear in random order. Those present agreed to receive test tapes in VHS format for sections 1A and 1C.

6. Other Business

ACTION: Address tape copyright, duplication cost, distribution and pricing issues. (Johnson)

7. Schedule Next 2 Meetings

The next two meetings of R4.3 WG4 were scheduled on:

- Friday, January 16, 1998 2pm EST
- Friday, January 23, 1998 2pm EST

8. Next Meeting Agenda

The sole substantive agenda for the next meeting is to finalize tape 2 parameters.

9. Adjourn

The meeting adjourned at 3:00pm EST. This meeting was held in accordance with CEMA rules and procedures.

Initial Proposal

Section I

A: Transmission of all valid Program Rating codes in successive 15 second intervals. Each 15 second segment will contain:
1) Captions and Text in field 1
2) Only XDS data in field 2 with PR (105) packet repeated with high priority.
3) Other XDS packets included are : 103, 102, 104, 110, 113, 501, 502
4) The field 2 pause (Zenith Inhibit) will be enabled.
5) OSD display of PR and other XDS packets.
6) Continuous running Time Code displayed in OSD.

B: Repeat of Segment A using selected non-valid Program Rating codes.

C: Repeat of Segment A with Rollup Captions present in field 2.

D: Repeat of Segement A with the PR codes transmitted only once every 3 seconds.

Other Suggested Sections

A: Segments with only the PR packet present in field 2. Transmission at a very high repetition rate. How many codes need to be tested?

B: Change Program ID or Program Name but leave PR unchanged.

C: Unblanking operation test.

Please Mark Your Calendar

NOTICE OF MEETINGS

PRESIDING CHAIRS: R-4 0 Bill Lagoni, Thomson Consumer Electronics
R-4.1 C. Bailey Neal, Thomson Consumer Electronics
R-4.3 Stephen Sigman, Zenith Electronics
R-4.6 John Teskey, Thomson Consumer Electronics

ORGANIZATION: Video Systems/Subcommittees

MEETING LOCATION: Hitachi America, Ltd.
307 College Road East
Princeton, NJ 08520
Tel: 609-520-0071
FAX: 609-520-8953

SCHEDULE OF MEETINGS

Monday, March 24, 1997	R-4.3	10:00 A.M. - 4:00 P.M.
Tuesday, March 25, 1997	R-4.1	9:00 A.M. - 12 Noon
	R-4.6	1:00 P.M. - 5:00 P.M.
Wednesday, March 26, 1997	R-4	8:00 A.M. -

NOTE: For planning purposes, please forward your RSVP for the above meetings to: mstone@eia.org; or FAX: 703-907-7601.

NAME:_____COMPANY:_____

Meeting(s) you plan to attend:

R-4.0 __/ R-4.1 __/ R-4.3__/ R-4.6__/

H:\dpt\cema eng\r4

EIA R4.3 meeting Princeton 3/24/97 ①

~~tape 1~~

~~000~~

014 Agenda 2. Approval of agenda
3 Add determination of quarom quorum

074 George ~~Hanover~~ CEMA guidline voting qualifications and quorum — to establish a small participation fee for non CEMA member companies.

382 approval of the minutes — Primary reason is to establish quoroms at meetings so that legitamate business can

519 ATVCC updates 708 — take place at meetings so that we move standards

A new draft is being generated from comments in the prelimary ballot, that were taken into accont. — out faster. All agendas and meeting announcements are posted to the CEMA website, under engineering. Minutes and draft standards are not posted.

511 out of 38 companies responded — and are sent only to active members. The rules

Thomson and GI had neg comments which have been resolved. The transport order is still to be worked out (display order) — for attendence apply to committees and subc.

192 The CEMA manual is a clearification of EIA manual.

298 notification 4 wks in advance

628 revised doc. available in two weeks from today

652 testing doc by testing system
Mark Dale and Altech and Phillips work is done. ~~other groups~~ Lacent work is not done and schedule for testing has slipped.
Plan was for March 24 with the simulator in place
708 updates to be postponed until testing is underway, or complete

1050 tools are recently available (programs)
simulation C-Code. Tools can be downloaded and used as a reference. Tools can run standalone on a PC,
Its the same tools that will be used on the air test with the model stations. The tools are helpful to review the specs

Exhibit 15 Page 562

CONFIDENTIAL SONY0073937

(C code) (2)

1531 all the source code to produce the simulator will be made public

1394 draft to be ready for ballot (IS) in

1096 June 1 ballot one time only

Since 708 is not ready 608 might be acceptable for ATV closed captionings. 608 will be simultaneously provided with 708 captions for approximately 10 years

tape 2

000 Dept of Education funding end March 31, Couple of agencies now providing funding

Lunch quorum is 51% voting members present. There is a quorum.

038 EIA-608(A)

042 Latency test requirements

EE6 is doing testing

076 converted field 1 Captioning to field two (removed redundant) included XDS codes, included interrupt.

110 EE6 test completion in 4 wks

3 see latency between channels for content advisory.
EEG has video tapes showing latency.
218 Some amount of field testing is still needed.

450 Rating equipment will cost ABC $1M

544 HBO presentation h.o.

700 Content Advisory is mandatory on TV sets not broadcasters, ~~the~~ broadcasters agree to voluntarily implement the Valenti ~~method~~

~~#225~~ Valenti proposal is still out for comment. The FCC will review the comments and then decide to accept it or try something else.
#255 Vote. The subcommittee will table the HBO proposal until FCC decides on Valenti method.
#244 Abstain EEG, GI, Nielsen, Sony, Sharp, Toshiba, VITAC, Bernia, Waveform
Yes Hitachi, Scien Tech, Matsucta, NAB, Philips, CBS, Thomson, Zenith, ABC
No HBO

#461 The ATV will have 20-24 bits that are dynamically definable.

↓233 Recommended Practices for next time
RP on advisories was pulled from CEMA guideline section to for more work — Deferred till next time

↓145 URL next time (Task force WG have not met)
make representation for next time
Broberg/Foler to meet before the next meeting and make a recommendations for the subcomittee.

↓134 CGMS-A
Bill Connolly to be present at R-4 meeting Wed.
Because of DVD introduction the question is does the CGMS-A Interim Standard need to be issued?
The subcomittee will go with any decision by the R-4 on Wednesday. EIA 608A will not be revised and balloted until content advisory issue is determined.

↓020 ACI with RP h.o.

Type 3
000

157 ACI with some editorial changes will go out for IS ballot.

168 Ballot resolution status
Completed.

175 Patent search results
36 patents relating to content advisories
more to receiver implementations
5 on transport

261 list of US patents at R-4 Wed.

274 Emergency messaging next meeting 2 wks after
NAB Strawman from Kelly Williams

282 SCTE for ATV messaging

476 Data broadcasting standardization
To establish physical layer and transport
Digitech – to document.

Agend for next time

605 1st R-4.3 believes that data broadcasting is a legitimate task for this subc. to undertake.
2nd R-4 will be notified that this will be agenda item to determine the appropriate action to be taken at the next meeting.
630 voted.

(6)

↓620 next meeting

June 25 R-4, 24 Tue TDSS Zenith Chicago

↓570 Sept. 24 R-4, 23 Tue FDSS Phoenix Hawaiian

↓533 Proposed Agenda.

ATV cc propose for balloting
lab testing for latency
RP format:
608 items (CRMS-A, ACL, patent search) dispersed.
Emergency messaging
data messagening

PRELIMINARY AGENDA
TELEVISION DATA SYSTEMS SUBCOMMITTEE
MARCH 24, 1997
Hitachi America, Ltd
307 College Road East
Princeton, NJ 08520
10:00A.M. - 4:00 P.M.

PRESIDING CHAIRMAN: Steve Sigman (Zenith Electronics)

1. Call to Order and Introductions

3 2. Determination of Quorum

4 3. Approval of Minutes

2 4. Approval of Agenda

5.. ATVCC Updates

- EIA-708 revised draft
- Model station testing

6. EIA-608(A)

- Latency test requirements
- Recommended Practices and Advisories format
- URL recommendation
- CGMS-A (need for interim std.)
- Recommended practice for ACI
- Ballot resolution status
- Patent search results

#30 presentation

7. Other

- Emergency messaging strawman proposal
- ~~Data broadcasting standardization (Digitech)~~

8. New Business
Data Broadcasting
9. Next Two Meetings/Dates/Location

10. Proposed Agenda

11. Adjournment

MINUTES
Consumer Electronic Manufacturers Association
Television Data Systems Subcommittee (R-4.3)
Tuesday, January 7,1997
Las Vegas Hilton
Las Vegas, NV

PRESIDING: Steven Sigman, Zenith Electronics

MEMBERS PRESENT:

Avio Systems	Mark Dale
CBS	Dick Streeter (consultant rep. CBS)
CEMA	George Hanover (Staff)
CEMA	Tom Mock (Staff)
Disney/ABC	Warner Johnston
EEG	Phil McLaughlin
HBO	Craig Cuttner
Hitachi HE	Mark Schuyler
Mitsubishi CE Am	David Broberg
Motorola	Mike Watson
NAB	Kelly Williams
Nielsen Media Res	Paul Kempter
Philips C E	Tom Schumann
Sony ATC	Richard Lowell
Thomson C E	Joe Forler
WavePhore	Bruce Jacobs (FWCLZ rep. WavePhore)
Zenith	Steve Sigman (Chair)
Consultant	Bernard Lechner

ACTION ITEMS FOR THE NEXT MEETING

ATVCC

Circulate 708 draft, report comments to Solomon (CEMA staff)
Revise 708 draft (Solomon)
Testing at model station (ATVCC Working Group)

EIA-608

Review latency test requirements (Posner, Williams, Cuttner, Schumann)
Develop format for Recommended Practice and Advisories (CEMA Staff)
Study URL proposal (Broberg , Lowell, Forler, Kempter)
Contact Conolly re urgency of releasing CGMS-A (CEMA Staff)
Automatic Cable Installation proposal with recommended practice (Schumann)
Complete Ballot Resolution Process (Staff)
V-Chip patents report (Staff)

Emergency Messaging - Strawman proposal to be compieted for manufacturer reaction (Williams).

Mission Statement - Report to R-4.0 (Sigman)

MEETING
Meeting was called to order by Chairman Sigman at 10:00 AM. Introductions were made.

MINUTES
Minutes were approved with the following changes:

Spelling of Thomson, Philips, Connolly.

Add underlined: Minutes of . . . approved with revisions to subtitling.

Add last sentence, first paragraph, of Content Advisory section: "The FCC cannot require receiver manufacturers to implement this until February 1998."

In Advisories section, change to: "Recommended practices need not be balloted." Add: "They require only a committee ballot and are not subject to the usual sunset provisions of an interim standard." Delete "Guidelines. . . practices." At end of second paragraph, add "and will be disseminated with the copies of the standard itself."

Under automatic Cable Installation section change "use" to "user." Change sentence "Could . . . cable box." to "The receiver cannot sense if a cable box is present."

AGENDA
The agenda was approved with the addition of Auto Cable Installation under item V.

ATVCC UPDATE
Draft Specification: In order to expedite the approval process of EIA-708, it was decided to seek additional comments by circulating the current draft document among members of R-4.3 and R-4.0. CEMA staff will circulate an "informal ballot" among this group with responses due by March 7. Results compiled and forwarded to Solomon by March 14 (staff); revised draft at the next meeting (Solomon.)

Altech ATVCC Simulator

Field Testing: Amnon Solomon reported that the Altec/Avio encoder/~~decoder~~ should be completed by the end of February. Bernie Lechner reported that Philips and Lucent will finish the redesign of the model station's encoder and decoder by mid-February. CEMA staff will arrange for ATVCC Working Group to meet with ATV model station personnel to resolve issues and establish a timetable for the following: 1.) Test transport mechanism and simulate caption display on PC screen; 2.) Test captions over ATV video; 3.) Develop ATV tape with 708 data stream embedded in it. Meeting to be held within 2 weeks.

Adoption Timetable: Timetable for approval of EIA-708 as an Interim Standard is as follows: "Informal ballot" and testing at ATV test station completed by next meeting (March 24.) Formal ballot sent out by April 1, responses due by May 1. Conflict resolution May 2-14. Subsequent meeting and adoption of standard May 15.

EIA-608:

Content Advisory : A conference call was held with Rick Engleman, Chief, Standards Development Branch, of the FCC Office of Engineering and Technology regarding content advisory rating system. Engelman stated that the FCC will ask for public comments on the

rating system proposed by the industry. Comment period will be 60-90 days. FCC will also issue a separate NPRM on the technical standard in the next 2-3 months. This NPRM may request information on rules for cable and dbs blocking, whether rating schemes should be mandatory or voluntary, whether alternate technology might be allowed and whether multiple rating schemes might be required. The FCC may not wait for the end of the comment period on the rating system to issue this NPRM on the technical standard. Engelman expressed understanding and agreement that the delivery mechanism for the technical standard should be XDS. He also expressed understanding of our industry's product introduction cycle, and the need to accommodate it as much as possible. The subcommittee informed Engleman that the FCC must give us the requirements for the rating system by Fall (Sept.) '97 in order to incorporate them into the standard by January 1, 1998. This would permit first production models in mid-1999 (18 months after the standard is finalized.) FCC may permit staggered introduction period so that not all chassis have to be changed at the same time. For example, half may be changed in 1999, the other half in 2000.

EEG
Bill Posner noted that field tests already conducted in Philadelphia have confirmed that the 608 content advisory latency specification is adequate. However, this testing has not been and may not be made public. After much discussion, the subcommittee agreed that the Content Advisory Task Force (Williams, Cuttner, Schumann) will work with Bill Posner to review all test information that may be available, and to identify by the next meeting any latency testing still needed.

The subcommittee discussed what it could recommend as to how CEMA might handle the content advisory issue with the FCC. After much debate, the subcommittee agreed that Sigman would present the following statements as its recommendations to R-4.0:

1. Recommend XDS as the delivery mechanism - we will complete technical work needed to verify that it works. Field test groups will review existing field test information, recommend any additional testing by next meeting.

2. Use 05 Hex packet (program rating current class) - leave MPAA rating as it is currently defined in the packet.

3. Use packet repetition rate of 3 seconds or longer.

4. Field 2 captions have priority over all other data.

5. This system will be able to support a rating scheme such as that proposed by the Valenti group.

Advisory / Recommended Practices: CEMA staff to complete revision of procedures, including development of format for advisories / recommended practices to accompany standards.

URL: David Broberg requested further input on Mitsubishi's proposal to carry URL's in XDS. A task force (Broberg, Lowell, Forler, Kempter) was formed to study the proposal, and report at the next meeting.

Automatic Cable Installation: Tom Schumann reported that the channel 3 problem could only be resolved by user intervention, and that it should be covered in a recommended practice. The proposal with recommended practice will be ready for ballot at the next meeting.

CGMS-A: The subcommittee requested staff to contact Bill Connolly to determine if the CGMS-A amendment needs to be released. It could be released as an interim standard if required.

Ballot Reconciliation: Sigman reported that reconciliation letters had been mailed to all parties that had voted either conditional approval or against EIA-608 and EIA-608(A). No responses have yet been received objecting to the reconciliation proposals. CEMA staff to pursue all follow-up correspondence and conclude the reconciliation process by the next meeting.

Patent Issues: Hanover reported that CEMA had retained an outside patent attorney to determine which patents may exist that impact XDS, especially content advisory issues. A patent search is believed to have been completed, but is not yet available. Hanover to advise results of patent search by next meeting.

The subcommittee does not foresee issuing a further revision of 608-a (608-b) before the content advisory system has been resolved. All other pending revisions (url, automatic cable installation, cgms-a) will be held pending resolution of the content advisory issue.

OTHER ISSUES

Subtitles: Joe Forler noted that SMPTE is developing subtitling specifications for ATV. Larry Goldberg of WGBH is acting as liaison for TDSS. Forler said that a goal of the SMPTE groups is to develop a superset of the ATV closed captioning syntax.

Emergency Messaging: Kelly Williams noted that the number of bits provided in the ATSC standard is not enough to satisfy FCC EAS requirements. Williams to draft strawman proposal by the next meeting.

Mission Statement: Sigman reported R-4.3 mission statement is completed; will be submitted to R-4.0.

NEXT MEETING

The next meeting will be held in conjunction with the R-4 meeting being hosted by Hitachi in Princeton, NJ. R-4.3 will meet on March 24. The following meeting will be in mid-May.

ADJOURNMENT

The meeting was adjourned at 4:35 PM. It was conducted in accordance with EIA Legal Guidelines and the Manual on Operation and Procedure.

Home Box Office
Content Advisory Proposal to R-4.3

HBO proposes that the 05h Program Rating Packet be expanded to include HBO content advisory bits and include "reserved" space for the yet-to-be-defined broadcast industry ratings.

The HBO proposal encompasses the following elements:

1. We propose that the 05h packet be expanded as described below and that "reserved bits" be set aside for "TV Industry Ratings" -- including room for growth as changes may be considered for that system. HBO does not propose to define those bits and only speculates as to the final system or quantity of data bits required to implement any other ratings or blocking system.

2. We propose that the blocking system be included only in receivers marketed as having such features. Therefore, the "block first" algorithm *may* be left to the discretion of manufacturer implementation and system latency may be less of an issue. Further revisions of "*Decoder Recommended Practices*" may be required -- including leaving other implementation issues to manufacturer design.

3. This proposal is for voluntary use in the Pay-TV venue. We do not wish to influence any current or future ratings systems for broadcast or advertiser-supported basic cable use, nor speculate on those systems being "finally" solidified for permanent inclusion in receiver design. Our system is ready **now.**

It is with that in mind that HBO affirms our proposal for content advisories. We believe that the over-the-air-broadcast ratings system and pay cable advisories will exist in parallel and hope that the committee adopt, using due process and consensus, a modified packet to accommodate both.

Craig Cuttner
Home Box Office
March 24, 1997

05h Program Rating

This packet includes four characters that contain information about the program's MPAA rating, mature-content advisories, and TV-Industry ratings. The characters are non-ASCII, so b6 must always be set high (b6=1). The following chart indicates the contents of the characters:

Character	b6	b5	b4	b3	b2	b1	b0
Rating	1	b0	b1	b2	r2	r1	r0
Advisory	1	v1	v0	s1	s0	m1	m0
TV Rating	1	t5	t4	t3	t2	t1	t0
TV Rating	1	t11	t10	t9	t8	t7	t6

The first byte includes both the "legacy" MPAA ratings bits (unchanged from 608-1994) and "status flags" to determine the validity of the following bytes (meaning that a program had been "rated" even if bits are at the "0" level).

b0 MPAA Status Flag
0 r2 - r0 bits are unused, MPAA ratings do not apply
1 r2 - r0 bits are valid MPAA ratings.

b1 Advisory Status Flag
0 v1 - v0, s1 - s0, m1 - m0 bits are unused, advisories do not apply
1 v1 - v0, s1 - s0, m1 - m0 bits are valid "Content Advisories".

b2 Broadcast TV Ratings Status Flag
0 t11 - t0 bits are unused, "Broadcast Industry Ratings" do not apply
1 t11 - t0 bits are valid "Broadcast Industry Ratings".

"Broadcast Industry Ratings"
t0 - t11 RESERVED (12-bits are available.)

Broadcast Industry Ratings are not defined at this time.

"MPAA Ratings"
(unchanged from 608-1994)

Three bits r0 - r2 are used to encode the motion picture rating if used.

r2	r1	r0	rating
0	0	0	N/A
0	0	1	"G"
0	1	0	"PG"
0	1	1	"PG-13"
1	0	0	"R"
1	0	1	"NC-17"
1	1	0	"X"
1	1	1	Not Rated

A distinction is made between N/A and Not Rated. When all zeros are specified (N/A) it means that motion picture ratings are not applicable to this program, (e.g. made for TV movies). When all ones are used (Not Rated) it indicates a motion picture that did not receive a rating for a variety of possible reasons.

Bits b5 - b0 in the second character are used to indicate a program's mature-content advisories. This character provides for three categories of mature content, each with four levels. The degree of content increases as the advisory level number increases in any given category. Bits v1 - v0 are used to convey information about any violent content in the program, s1 - s0 are used to provide information regarding any sexual content in the program, and bits m1 - m0 are used to provide information about any mature content in the program.

"Pay-TV Advisories"

m1	m0	
0	0	No Mature Content
0	1	Adult Language (AL)
1	0	Adult Content (AC)
1	1	Graphic Language (GL)

s1	s0	
0	0	No Sexual Content
0	1	Brief Nudity (BN)
1	0	Nudity (N)
1	1	Strong Sexual Content (SC)

v1	v0	
0	0	No Violent Content
0	1	Mild Violence (MV)
1	0	Violence (V)
1	1	Graphic Violence / Rape (GV / RP)

All program content analysis is the function of parties involved in program production or distribution. No precise criteria for establishing /content ratings or advisories are given or implied in this section. The characters are provided for the convenience of consumers in the implementation of a parental viewing control system.

The data within this packet should be cleared or updated upon a change in the information contained in the current Class Program Identification Number and/or Program Name packets.

Cable Channel Mapping System

offered by

Automatic Cable Installation Workgroup

EIA/CEMA Television Data System Subcommittee (R4.3)

1. Introduction

This recommendation for Cable Channel Mapping is based on using the EIA-608A Extended Data Services (XDS) to transmit the map information from a cable headend to a receiving device. This system will allow a consumer electronic device, such as a television or a set-top box, the capability to determine which channels are selectable, and when necessary, re-map these user selectable channels to their tuneable channel number.

Implementation of this system would require the addition of three new Miscellaneous Class data packets and revision of the High Level Encoder Requirements (section 10.7).

2. Overview

This plan will consist of a table of available channels on the cable system, specifying the actual channel they are broadcast on, the channel which the user selects, and an optional field containing the channel's identification letters. Every channel that is broadcast on the cable system would be listed in the table, whether it is re-mapped or not. This would enable the receiving device the capability to quickly download the channel configuration of the system.

The Automatic Cable Installation (ACI) XDS channel map packets described herein are to be broadcast on the lowest non-scrambled universally tuneable channel available between channels 2 and 13, inclusive. If it is not plausible to transmit the map packets on one of these channels, then the Channel Map Pointer packet will exist on the first non-scrambled universally tuneable channel available between channels 2 and 13, specifying the tuneable channel number that contains the ACI packets. This would require the cable company to have at a maximum 2 XDS inserters to comply with channel mapping. In all cases the channel chosen for the Channel Map or Channel Map Pointer packets may not be remapped.

The Channel Map includes a version number contained in the Channel Map Header to allow a receiver to quickly determine the latest update of the map data. The Channel Map Header packet will be transmitted more frequently than the complete Channel Map allowing a receiver to quickly read the version number and determine whether it needs to update its internal mapping.

3. Modifications to EIA-608(A)

3.1 General

a) A statement should be added to EIA-608 (*Section 6.2?*) indicating that; **unused bits are designated by "-" in format charts and should be set to logical 0.**

b) A statement should be added to EIA-608 (*Section 6.2?*) indicating that; **unless otherwise stated, channel numbers in packet data fields are referenced to EIA 542.**

This would affect the existing section 6.5.4 packet 40h and proposed packets 41h and 43h.

3.2 Channel Map Pointer Packet

This packet will be a new packet and will be added to EIA-608 in section 6.5.4 Miscellaneous packet :

41h Channel Map Pointer

This packet contains two non-ASCII informational characters used to define a channel number having the following format:

Character	b6	b5	b4	b3	b2	b1	b0
Tune Chan Lo	1	c5	c4	c3	c2	c1	c0
Tune Chan Hi	1	-	-	c9	c8	c7	c6

The bits (c0-c9) define a binary number that represents the channel number which contains the Channel Map Header and Channel Map packets. The Channel Map Pointer packet is needed when the Channel Map Packet and the Channel Map Header Packet are not transmitted on the first non-scrambled tuneable channel between 2 and 13. Otherwise, this packet should not be transmitted.